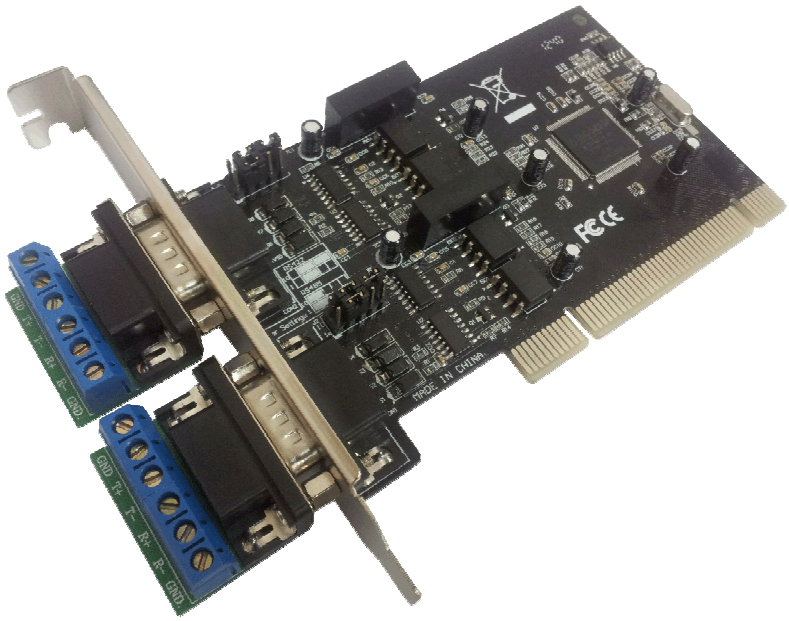
User manual

PCI TO RS422/RS485 Convertor



Summarize

PCI TO RS422/RS485 Convertor is a universal converter of PCI to RS485/RS422, which is without addition power supply, compatible with PCI, RS422, RS485 standards. It can convert PCI signals to a balanced differential RS422 or RS485 signals. Each line has surge protection, and various surge voltage protections. The tiny capacitance distance guarantees RS422 / RS485 interface of high-speed transmission. RS422, RS485 connect by RJ45 and DB9 interface. Converter with zero delay automatic transceiver inside, unique I/O circuit automatically control data flow direction, without any handshake signals (such as RTS, DTR,etc.) and jumpers set realize full-duplex, half-duplex mode conversion, plug and play. Ensure the product fix for all existing communication software and hardware interface.

Function

PCI TO RS422/RS485 convertor supports four communication modes:

1, Point-to-point / 4-line full-duplex
2, Point-to-multi point / 4-line full-duplex
3, Point-to-point / 2-line half-duplex
4, Point-to-multi point / 2-line half-duplex

When the convertor is working at full-duplex or half-duplex, needs to add a matched resistance to avoid reflects and disturbance of signal. (120Ω，1/4W)

Hardware Installation and utilization

Please read carefully product manual before install PCI to RS422/RS485 converter, then insert PCI Card which attached to USB port. This product use USB/DB - 9, general connectors for input/output interface without jumpers, automatically identify RS422 or RS485 communication mode. Fit for twisted-pair cable or shielding wire connection, very convenient to disassemble. Point-to-point, point to more, full-duplex communication that connect four wire T/R +, T/R - and RXD +, RXD -, point-to-point, point to more, half-duplex communication that connect two lines T/R +, T/R -.

Performance parameter

1. PCI Specification Revision 2.1 compliant
2. Compliant with RS485 RS422 standard.
3. RS422 signal: T/R+、T/R-、RXD+、RXD、GND
4. RS485 signal: T/R+、T/R、GND
5, Working mode: asynchronous working, point-to-point or point-to-more, full duplex 4-line, half duplex 2-line
6, Support for the free switching RS485.RS422 mode,RS422/485 end transmission distance can reach 1200 meters(9600bps)
7, Band Rate: 75-128000bps, automatically detects serial signal rate
8, load capacity: support to more each converter allows connecting 32 RS422 interface RS485 or equipment
9, Transmission range: 1200meter of RS422/485
10. Each serial signal for an additional TVS transient diode, which can prevent the following 400W surge signal crosstalk, improve communication stability.
11. Builit-in photoelectric isolation and DC-DC voltage converter, can effectively isolate the outside pressure, to avoid the impact of equipment.

12, Interface:DB9 Male

13, Transmission media: twisted-pair or shielded wire

14, Transmission rate: 921600bps at 300M

38400bps at 600M

9600bps at 1.2KM

15, Operating environment: -25℃ to 70℃, relative humidity at 5% to 95%

16 Support Windows98/ME/2000/XP/Vista/7/8/8.1（32/64bit），Linux，MAC

Interface and signal

DB9 pin: RS422/RS485 pin assignment for the output signal & terminals block

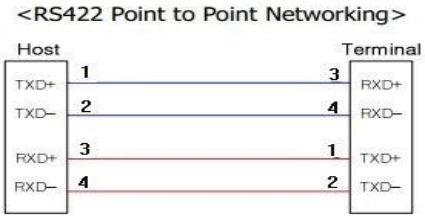
DB9 Pin	Output signal	RS422 Full-duplex connection	RS485 Half-duplex connection
1	T/R+	TXD（A+）	RS485(A+)
2	T/R-	TXD（B-）	RS485(B-)
3	RXD+	RXD（A+）	N/A
4	RXD-	RXD（B-）	N/A
5	GND	GND	GND

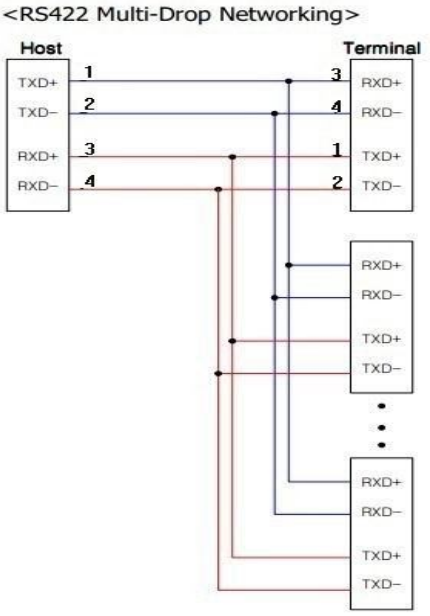
On board mode select(jumper settings):

RS485 RS422（Default）

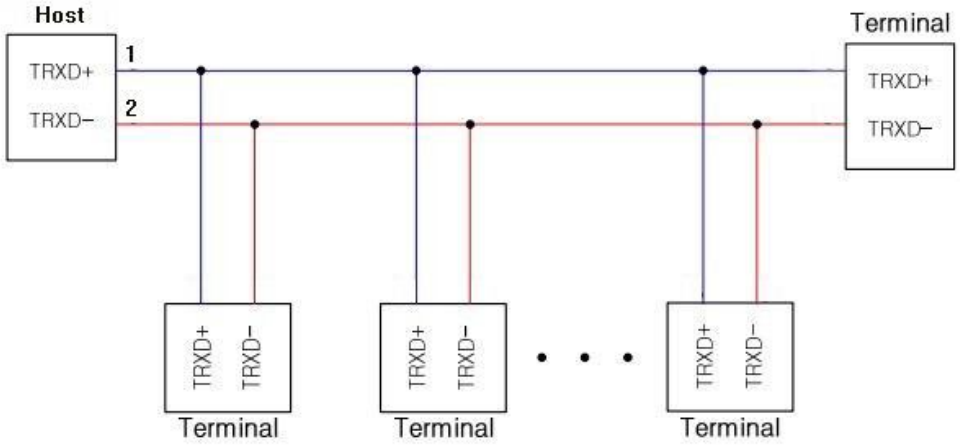
Connection instruction

1.For RS422 Cabling





2.For RS485 Cabling



Driver Installation

For Windows® 2000/XP/win7/Server 2003

1. Don't insert the PCI card into PCI slot.
2. At the Windows desktop click **Start**, then **Run**.
3. Type **D:\PCI_IO\MCS9865\XP\PciSetup.exe**, then click **OK**.
4. Press **"Install"** button to install the drivers.
5. Click **"Exit"** button to complete the driver installation.
6. Shutdown the PC.
7. Place the PCI card into PCI slot and then power on the system.
8. Once the system gets booted the Windows will automatically start installing the device driver software.

For Windows® XP-x64/Server 2003-x64

1. Don't insert the PCI card into PCI slot.
2. Type **D:\PCI_IO\MCS9865\XP64\PCISetup.exe**, then click **OK**.
3. Press **"Install"** button to install the drivers.
4. Click **"Exit"** button to complete the driver installation.
5. Shutdown the PC.
6. Place the PCI card into the PCI slot then power on the system.
7. Once the system gets booted the Windows will automatically start installing the device driver software.

To Verify Windows® Driver Installation

Click on the **Device Manager** tab in System Properties, which you access from the Windows Control Panel. If you use the 2S1P card, you should see two **High-Speed PCI Serial Port …** and one **PCI ECP Parallel Port …**installed under **Ports (COM & LPT)** item.

Package Connectors

2 x DB9 TO 6PIN connectors
1 x Driver CD
1 x User's Manual

System Requirements

Linux/Mac/98/ Windows® 2000, XP/2003 32/64 bit, Vista /Win7 /Win8/8.1 32/64 bit
Available PCI slot

Support:

If you have further questions, please contact our customer support and you can find more information on our homepage: